

THE
GEOGRAPHY OF NEW JERSEY
SUPPLEMENTARY TO
DAVIS AND DEANE'S
INDUCTIVE GEOGRAPHIES

BY
MARY R. GALE DAVIS, P.D.M.
NORMAL TRAINING TEACHER, INSTITUTE INSTRUCTOR, AND SPECIALIST
IN PHYSIOGRAPHY



SILVER, BURDETT AND COMPANY
NEW YORK BOSTON CHICAGO

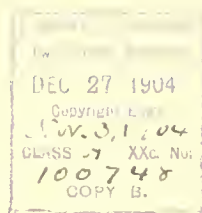
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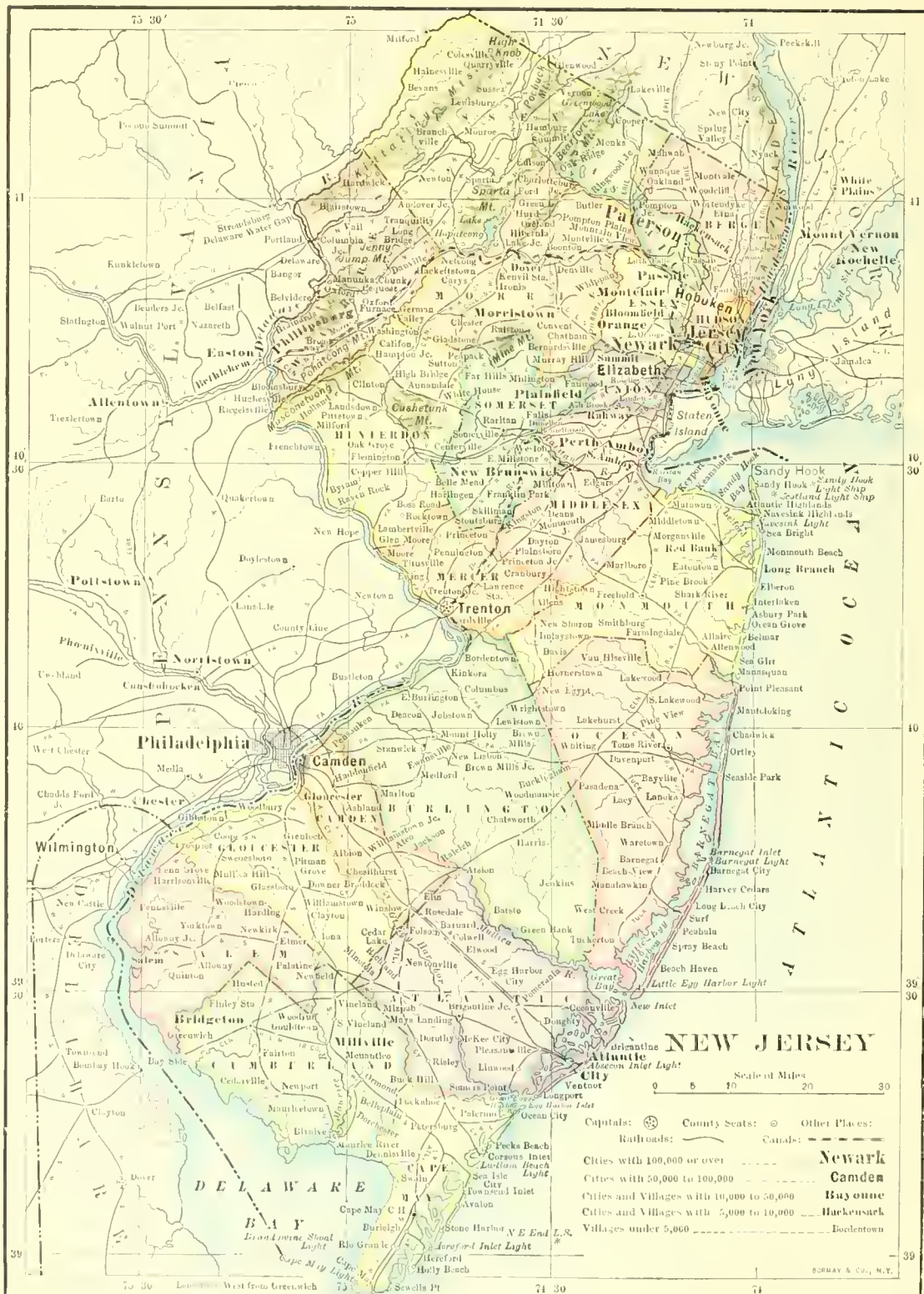
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THE GEOGRAPHY OF NEW JERSEY.

NAME.—New Jersey is named for the Island of Jersey, which is located in the English Channel, between England and France. It was so named in honor of an Englishman, Sir George Carteret, who was at one time governor of this island. He became one of the early proprietary lords of New Jersey. This was about two hundred and fifty years ago.

LOCATION.—In what part of the United States is the State of New Jersey located? To which group of States does it belong?

SIZE.—About how many square miles is the area of New Jersey? (See page 23.) Compare the size of New Jersey with that of New York, Pennsylvania, Illinois, California and Texas.

BOUNDARY.—Point out New Jersey on the map of the United States and trace its boundary. What States bound New Jersey? By what body of water is the greater part of New Jersey bounded on the east? What river is on the northeast between New Jersey and New York? What river is on the western and southwestern boundary? What bay is on the south? Trace the boundary line through this river and bay.

Find New York Bay, Newark Bay, Raritan Bay, Staten Island, which belongs to New York, and Long Island. Trace the boundary line between New York and New Jersey through the Hudson River, New York Bay, Staten Island Sound and Raritan Bay.

Find Barnegat Bay. Through what inlet would you sail from the Atlantic Ocean into Barnegat Bay? Locate Barnegat Light. Why do you think the light is located here? Locate Great Bay. What other bays, inlets or sounds can you find on the New Jersey coast? What other lights?

Trace in the air the shape of New Jersey.

Draw its outline and print the names of its boundaries. Name and locate on this map the principal indentations and projections on the coast.

SURFACE AND DRAINAGE.—To what great surface slope does New Jersey belong? What great body of water finally receives all the



VIEW TOWARD DELAWARE WATER GAP, MANTUNKA CHUNK, N. J.

drainage of New Jersey? From the relief map of New Jersey tell which part consists of high, uneven land; which of lowland.

Trace the shortest route from the Raritan Bay to Trenton on the Delaware River. This line marks a division between northern or highland New Jersey and southern or lowland New Jersey.

Highlands.—To what great mountain system do the highlands of New Jersey belong? Which range of this system extends into New Jersey



and by what name is it known? (Relief map, p. 4.) Find in this range the Delaware Water Gap. Note that at this point the Delaware River crosses or cuts the mountain range. Find and locate High Knob, the highest peak of this range in New Jersey. Trace, name and locate any other mountain ranges or peaks belonging to highland New Jersey. Point out and trace the Piedmont Plateau in New Jersey. Tell its direction from the Appalachians. Tell in what direction it extends. Trace the highlands of New Jersey from Pennsylvania into the State of New York and across the Hudson River at the Palisades into New England. Observe that north-eastward from New York Bay the Piedmont extends nearly to the coast.

During the *glacial period*, what is now northern New

Jersey was buried under the southern border of a great ice sheet or glacier, which covered the northern part of the United States and North America to the Arctic Ocean.

The ice of this glacier wore out and ground down the mountains and gouged out the valleys. As it melted, it left soil, sand, gravel and other glacial material which changed and modified the rugged surface of the land.

Sandy plains, sand-hills, boulder-strewn land and many lakes and ponds

are the facts which now tell us of the former ice-sheet which covered this section of New Jersey.

LOWLANDS.—Trace the boundaries of the Atlantic Coastal Plain northward from the Southern Agricultural States. Observe that this plain is narrowed by the Piedmont as it approaches New York Bay. Which part of New Jersey belongs to this plain?



THERE ARE MANY FINE DRIVES THROUGH THE PINES ON THE COASTAL PLAINS.

Nearly one-third of the area of the *coastal plain* in New Jersey is very low, it being less than 50 feet above sea-level. The lowest portion consists of the tidal marshes which border the coast.

A small portion of the plain reaches a height of about 400 feet in a range of elevations or hills stretching in a northeast southwest direction between the Navesink Highlands on the coast near Sandy Hook, to Mount Holly. The greater part of the plain is about 200 feet above sea-level.

The entire plain was long, long ago uplifted from under the sea to a much higher level than it has at present. Since the uplift it has lowered until portions of land near the coast are

drowned, and the sea has set back into the land forming New York, Raritan and Delaware bays, and other indentations in the coast. These bays, thus formed, are among the best harbors on the eastern coast of North America—New York and Delaware bays being navigable for the largest vessels in the world.

Trace the outline of Sandy Hook, and give the reason for its name.

Sand bars or reefs skirt the coast from Sandy Hook to Delaware Bay, except for a short distance between Monmouth Beach and Manasquan. (Point out these places.) These bars form a sandy beach consisting mostly of sand dunes along the ocean front for more than 100 miles. Upon this beach there are many popular seaside resorts at which people sojourn during the summer season for the benefit of the sea baths and the invigorating sea air.

The sand bars or reefs are formed by the action of the strong winds and waves of this coast which beat up the sand from the shallow sea bottom, and slowly build it into these off-shore beaches.

Between these beaches and the coast there are many long, narrow bodies of salt or brackish water. These bodies of water are called *lagoons*.

Observe that there are many inlets in

the reef which borders the coast of New Jersey. Observe also that the larger inlets are at the mouths of rivers. The combined force of the river current from within and the wave currents from without serve to break and to keep open the sandy reef at these points.

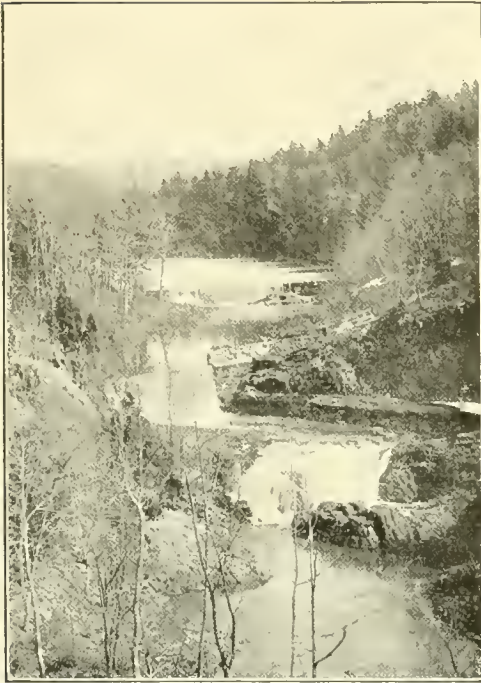
The lagoons are being slowly filled up by the material which the rivers carry to them, and by the continuous shifting and drifting of the sand by the wind and waves.

After a time the drifting sand is held in place by the roots of a coarse grass that grows in it. Then marshes are formed and finally solid land. In this way the coastal plain and shore line are being built out farther into the sea. These changes go on steadily so that every few years many of the large hotels at the seaside resorts are obliged to be moved or rebuilt in order to be "on the sea."

The great number of lights on the Jersey coast are maintained by the United States Government, as are also the Life Saving stations which are established along the coast.

What do the many lights tell us about the New Jersey coast? What relation is there between the many lights and the Life Saving stations? There are few large harbors; can you tell why?

On the relief map, trace the water-parting between the *streams* which find their way eastward directly to the sea, and those whose waters reach the sea by way of the Delaware River and Bay. Point out the *water-parting* and tell its



CHIMNEY ROCK FALLS, RARITAN RIVER,
IN SOMERSET COUNTY.

general direction. Trace the streams down each slope, naming and describing them as you do so. You find that the longer, larger streams flow eastward, while many small streams—runs, brooks and creeks—flow into the Delaware.

Tell which streams of the coastal plain you think are most sluggish in their flow, and why.

Rivers.—The most important *ivers* of New Jersey are the Passaic, Hackensack, Raritan, Mullica, Great Egg Harbor and Maurice.

Which of these flows into Newark Bay? Which into lower New York Bay? Which flows into the lagoons of the Atlantic? Which into Delaware Bay? Which rivers drain northern New Jersey? Which southern New Jersey?

The Passaic River reaches the sea after making many turns and curves, and two falls, called Little Falls and Passaic Falls. The first Falls forms a beautiful cataract. At the second, in Paterson, the river takes a tremendous leap over a precipice of 90 feet into a great cleft of rock. Here the water is churned into foam and a spray is thrown many feet into the upper air, making a scene of imposing grandeur.

Most of the streams of northern New Jersey are fed by the mountain lakes and ponds. These streams flow rapidly and furnish the many great industrial centers on their banks with water-power for manufacturing purposes.



PASSAIC FALLS AT PATERSON.

Lakes.—There are many small *lakes* beautifully located among the northern highlands of New Jersey. The two largest and most important are Lakes Hopatcong and

Greenwood—the latter lying on the northern border and partially in New York. These lakes, with many smaller



LAKE HOPATCONG.

ones, are popular summer resorts. Can you think of any reasons for this?

On which surface division of New Jersey do you live? On which slope? What is the character of the surface in your locality?

Which of the most important rivers are in your section of the State? What small streams or lakes or ponds are in your section? Find out all you can about the surface and drainage of the section in which you live.

Draw the rivers in the map of New Jersey which you have already begun. Also draw them in a *second map*. Carefully correct any errors in this second drawing, and outline the rivers in blue pencil or crayon. Then color the surface of the second map a light green to represent lowlands, and brown to represent highlands. Indicate the general water-parting in lighter brown than the mountain ranges, and the sand reefs and very low marshy land on the coast with lighter green than the lowlands. Color the border waters a pale blue. Caution: be careful to keep the colors soft and light. Print the names of the great surface divisions on the colored map, as in the relief map of New Jersey.

Print the names of the important rivers and lakes in the first or progressive map. Then draw the mountains and peaks in this map and print their names.

CLIMATE.—In which part of the North Temperate Zone does New Jersey lie? How many *sea-*

sons does it have? Compare the length of its summers with the length of those of Maine; with those of North Carolina. Compare its winters with the winters of Minnesota, Missouri, South Carolina. Which of these States must have the earliest spring? How does this affect the vegetation of these States? Which of these States must make early preparation for winter? How does this affect the vegetation—as the ripening of fruit and grains? Judging from the position of New Jersey in the North Temperate Zone, which part is colder? Which warmer? Why?

Which part of New Jersey is made cooler by its *height above sea-level*? Which part must be especially affected by its seaward slope?

How is the section in which you live affected by its height above sea-level? How is it affected by the sea?

What are the *prevailing winds* of your section during the summer? During the winter? Which of these winds are dry? Why? Which are moist? Why?

As the entire State of New Jersey lies on the Atlantic slope, the climate is much modified by the effect of the sea, and has a more uniform *temperature* during each season than many other States.

There is a marked difference of temperature between the northern and southern parts of New Jersey. This is due to three causes, viz: (1) the northern part lies farther north in the temperate zone; (2) it is higher, and (3) it lies farther away from the modifying influences of the sea.

The *easterly winds* of New Jersey are made warmer and more moist because they blow over the Gulf Stream Drift, which flows from the equatorial regions through the Atlantic towards the Polar

regions. (See p. 98, Elementary Geography.)

The *prevailing winds* of the State are the northeast, or trade winds, and the westerlies. All places directly on the sea have a strong *sea breeze* during a part of the day and a *land breeze* during the night. The seaward slope gives New Jersey plenteous *rainfall*.

The whole State is most healthful, and there are many summer and winter *health resorts*. Lakewood, located in the heart of the pine woods of the coastal plain, is a most popular winter

resort. The deep sandy soil allows good drainage, and the air is dry and particularly healthful for consumptives.

Atlantic City, Asbury Park and Cape May are winter resorts for invalids as well as summer resorts for other people. Long Branch, Elberon and Ocean Grove are also well-known summer resorts.

Locate each place mentioned. Tell the direction of each from the place in which you live.

Indicate by arrows the prevailing winds on the surface map you have made; also indicate the Gulf Stream Drift.

THE SOIL AND ITS PRODUCTS.

(Bring in pictures representing industries of New Jersey. Paste them neatly on a sheet of manila paper, or gray card-board.)

The *soil* of New Jersey is for the most part a red sandy loam which is easily tilled. It is most fertile in the river valleys and in the hilly sections of the northern part of the State. It is lighter and less fertile towards the south.

The long, gentle seaward slope of the coastal plain from the hilly section of the southern part of New Jersey has a deep sandy soil which is



THE BEACH AND HOTELS AT ATLANTIC CITY.

overgrown with *pine forests*. Near the shore the forests have been cleared for small farms. The most fertile soil of southern New Jersey is on the westerly slopes towards the Delaware, and here are located the best farms of this part of the State.

The nearness and easy access to the great markets of New York and Philadelphia have stimulated the farmers of New Jersey to improve their farms and to bring them to a high state of cultivation.

Truck gardening, dairying, and fruit

raising are the special industries of the farmers, in addition to the raising of the ordinary farm products for house uses. *Vegetables, small fruits, and orchard fruits* are raised in abundance.

The most important vegetables are potatoes, sweet potatoes, onions, tomatoes, cabbages, sweet corn, asparagus, green pease, green beans, musk melons, water melons and cucumbers.

The most important small fruits are strawberries, cranberries (which are raised in the boggy soil of the southern part), blackberries, currants, raspberries, and gooseberries.

The raising of early vegetables and small fruits for supplying the demands of the people of the cities and health resorts is a source of great revenue to many of the New Jersey farmers. These early fruits and vegetables are grown and ripened under glass, so as to force their growth.

The most important orchard fruits are peaches, apples, pears, cherries, plums and prunes. The raising of peaches is largely confined to the north-western part of the State. Grape-culture is increasing.

The raising of orchard fruits has led some of the farmers to grow *nursery products* as their principal business in order to furnish seedlings to the fruit growers.

Few States surpass New Jersey in the raising of flowers and foliage plants. They are also cultivated in hot houses, and supply the flower markets of the great cities during the winter months.

The constantly growing demand for *dairy products* made by the steady increase of city population, and by the growing popularity of the health resorts, has led many of the New Jersey farmers to especially engage in dairying and stock raising.

Millions of gallons of milk and cream, and millions of pounds of butter are produced and shipped every year to the great centers for distribution. There is also an ever-increasing demand for poultry and eggs, which leads small farmers to specialize in this direction. The increase in the number of cows and poultry has kept up the demand for the different grains upon which they are fed, and promoted the cultivation of corn.

Corn and wheat are grown in all sections, while the raising of buckwheat, rye, oats and barley is confined principally to the northern part of the State.

PRODUCTS OF FISHERIES.—The great extent of the New Jersey coast line, with its many inlets and bays, furnishes the natural conditions for developing large *fishery industries*. Many thousands of people are thus engaged throughout the

year in the little fishing villages along the coast.

The principal *fishery products* in their order of importance are *oysters, clams, shad, squeteague, bluefish and cod*. These products are a source of food supply for the great industrial cities and seaside resorts.

Mining and Quarry Products.—New Jersey is rich in *clays*. As a result, the State ranks second in the Union in the production of pottery

and third in the total production of clay products.

A very fine grade of clay is found on the western slope of the coastal plain, from which fine pottery is manufactured. *Trenton* is the leading city in the United States in the "potteries" industry. Tiles and brick are manufactured in all parts of the State from a poorer clay.

In the southern part of the State, there is an abundance of fine sand which is most valuable in the manufacture of *glass*. *Bridgeton* and *Millville* are the principal glass manufacturing centers.

This section has been a glass-making center since very early in the history of New Jersey. One of the largest window and bottle plants in the State is still owned and managed by the descendants of the men who started it nearly one hundred and twenty-five years ago.

Several valuable *building stones* are

quarried in the State, viz.: *granite, sandstone and marble*. New Jersey ranks second in the production of Portland cement.

Find out what cement is and how it is made.



HAULING IN A CATCH OF FISH AT ATLANTIC CITY.

There are extensive ledges of *gneiss* and *trap-rock* which are valuable in road building. New Jersey has some of the best roads in the United States. Road making has been made easy in the State by the abundance and nearness of the necessary rock material.

Valuable *iron* ore has been mined in the northwestern part of New Jersey since very early times. It supplies the great iron and steel industries of the State with the raw material for their manufactures. Other ores of less importance are *zinc, manganese* and *copper*.

There are large deposits of *marl* in the State, which is used for fertilizing the farmlands.

Find out of what marl is composed and why it is a good fertilizer.

THE LUMBERING INDUSTRY.—The forests of New Jersey are now mostly of the second-growth timber—the first growth, which consisted largely of hard woods, having been long ago cleared away. The increase in the lumbering industry is shown by the increase in the manufacture



A VIEW IN WEST ORANGE, N. J., SHOWING A TYPICAL LEDGE OF TRAP-ROCK.

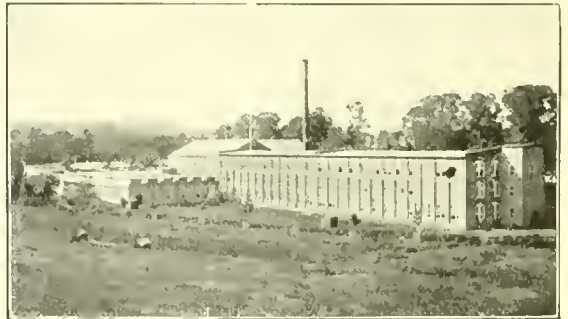
and output of *planing-mill supplies*—that is, supplies of lumber, sash, doors and blinds.

MANUFACTURE AND MANUFACTURING.—New Jersey is rapidly developing many great industrial centers, and already ranks sixth in the United States in the value of *manufactured products*. This is due to several reasons, chief of which are (1) its geographical position on the Atlantic seaboard; (2) its nearness to the great industrial and trade centers of New York and Philadelphia;

(3) its unexcelled means of transportation; (4) its resources of iron and valuable clays and sands; (5) its easy access to the great coal fields of Pennsylvania; (6) its cheaper living facilities, which have caused many manufacturers to move their industries from New York into New Jersey.

The most important group of industries in the State consists in the manufacture of the *textiles*, viz.: *silk* and *silk goods*, *cotton goods* of all kinds, *worsted*s and *woolen*

goods, *hosiery* and *knit goods*, *carpets* and *rugs*, *dyeing* and *finishing textiles*, and *shoddy*. In the production of silks and silk goods New Jersey



A PROSPEROUS MANUFACTURING PLANT IN A SMALL COMMUNITY.

ranks first in the Union. This industry is centered in the towns and cities of the northern and middle sections of the State. *Paterson* is the oldest and largest silk manufacturing city in the United States. It is called the "Lyons of America;" can you tell why?

Find out

which cities manufacture cotton goods; which, worsteds; which, woolen goods; which, knit goods; which, carpets and rugs; which, dyeing and finishing textiles. Find out all you can about each of the textile industries. Write a short description of the more important ones. Make a special study about any textile manufactured in the locality in which you live.

The various *iron and steel manufactures* form the second important group of industries, which are for the most part located in the northwestern and central portions of the State.

The nearness of the iron and coal supply, and the abundant means of transportation have greatly aided in the rapid growth and development of the iron industries in the State. *Newark, Paterson,* and *Elizabeth* are the largest centers for

the manufacture of iron and steel and their products.

One of the largest and oldest manufacturing factories of pig iron is at *Oxford*. Steel



A CARRIAGE FACTORY AT NEWARK, N. J.

is manufactured in *Newark, Boonton, Dover, Phillipsburg, Paterson, Passaic and Trenton*. The *Trenton* steel wire is sent

to all parts of the world.

The manufacture of *foundry and machine shop products* ranks second among the various industries of New Jersey. Great machine shops and foundries are located in *Newark, Jersey City, Hoboken, Paterson, Plainfield, Elizabeth, Camden and Phillipsburg*. *Elizabeth* has one of the largest sewing machine plants in the United States.

Electrical apparatus and supplies are other industries which depend upon iron and steel for working material.

The *refining of petroleum* is an immense, though comparatively new, industry, which ranks third among the industries of the State. *Bayonne* is the

great center of this industry, its position on the deep sea allowing vessels to be loaded directly at the docks.

Why is it desirable to load petroleum products directly at the docks? Find out what the petroleum products are. Which are of the most importance? What are some of their various uses? How are the different products handled and shipped? How is the crude petroleum transported from the oil fields to the refineries?

New Jersey is one of the leading States in the manufacture of *jewelry*, in the *tanning* and *finishing of leather*, and in the manufacture of *malt liquors*, and in each of these industries *Newark* takes the oldest and the leading rank.

Other manufactures are *chemicals*, the leading centers for this industry being *Newark*, *Camden*, and *Bayonne*; and rubber and elastic goods, with centers at *Newark* and *New Brunswick*.

You may note that most of the manufacturing and trade centers of New Jersey are within a radius of 50 to 75 miles of New York. United with New York, they make the greatest manufacturing and commercial center in the world.

MEANS OF TRANSPORTATION AND COMMUNICATION. — *Railroads*, steam and electric, traverse New Jersey in all directions, connecting industrial centers with each other and with New York Bay, Hudson River, Staten Island Sound, and Raritan Bay.

There are seven trunk line railroad

systems in the State all terminating near New York Bay on the Jersey side of the Hudson River. These railroads gather up the different products of the sections through which they pass and carry them to the great consuming and distributing center, New York City. Here these products are sold to the people of this great city and its vicinity for immediate use, or they are sent into New England and New York State, or are shipped as exports by steamships to other parts of the world.

New York gathers the world's products in imports by land and sea from the West and the East, and sends them out southward and westward across New Jersey to other trade and industrial centers in New Jersey and other States.

Millions of people are carried across the State of New Jersey every year, and the value of the freight traffic through New Jersey amounts to billions of dollars annually.

The principal railroads entering New York from New Jersey are the *Delaware, Lackawanna and Western*, the *Baltimore and Ohio*, the *Eric*, the *Pennsylvania*, the *Central Railroad of New Jersey* and the *Lehigh Valley*.

There are many local trains which connect towns and cities of New Jersey with New York. These are for the benefit of the business men and women living in

New Jersey and going daily to their business in New York. The people who patronize these trains are called *commuters*, because they get certain rates and commutation tickets from the railroads.

The electric railway service has done more than all other service to bring the farmers of the sparsely settled localities into communication with the trade centers, thus bringing the people of the cities and country into closer social contact.

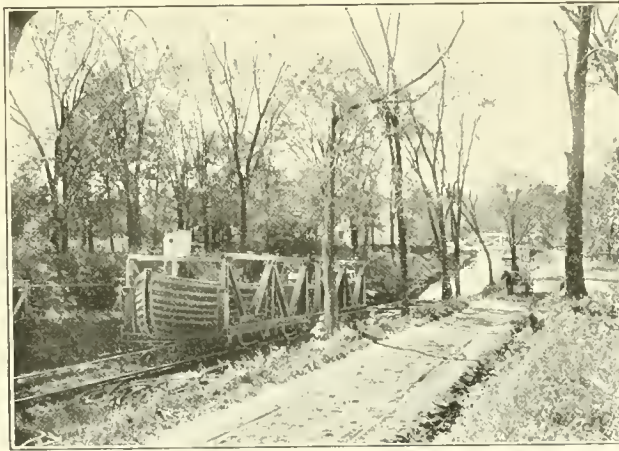
Canals.—New Jersey has two important canals, viz: the *Morris Canal* and the *Delaware and Raritan Canal*.

The Morris Canal is owned by the Lehigh Railroad. It extends from Jersey City to Phillipsburg, on the Delaware River. Vast quantities of coal are transported by this canal from the coal fields of Pennsylvania. The Delaware and Raritan Canal, now leased to the Pennsylvania Railroad, connects New Brunswick with Bordentown, with a branch to Trenton.

What benefit is derived in shipping coal and lumber by canal rather than by railroad?

Telegraph and *telephone* service connects all parts of New Jersey with each other and with other sections of the world.

The *rural free delivery* of the mail service of the United States Post Office Department reaches many of the farmers, delivering at their door magazines, newspapers and letters several times a week, and thus bringing them into communication with the whole world and its doings.



DRAWING A BOAT UP AN INCLINED PLANE FROM THE LEVEL OF ONE CANAL TO ANOTHER.

POPULATION, RELIGION AND SCHOOLS.

—Which of the three great *races* of mankind do you find in New Jersey? What *nations* representing the white race? The yellow race?

From the Appendix (p. 24), state the *population* of New Jersey. How does the population compare with the other States of nearly the same size? Can you think of any reasons for this difference in population between New Jersey and each of these other States? From the map, tell which part of New Jersey is most thickly peopled. Which most thinly? Why is this probably so?

What *religions* are represented in New Jersey? Which branches of the Protestant religion do you know about?

Schools.—New Jersey has a fine, well-organized system of *public schools*.

Besides the public schools, there are numerous *private* and *parochial schools* in the State. All of the schools—public and private—are doing a great work in educating the children of the State.

Find out from your parents or others all you can about the public schools of New Jersey. How are they supported? Who has the care of these schools? Who selects the teachers? How are they paid for their services?

A State Normal School for the special training of teachers is located at Trenton. Who supports it? Find out by what terms pupils attend this school. Find out where some of the best

private and parochial schools are located; how they are supported, and who has the care of them.

Find out where Princeton University is located; who its president is, and how it is supported. Where is Rutgers College located?

Many students in New Jersey take advantage of the commuters' rates which the railroads afford and study in the great business, art, musical and literary centers of New York and Philadelphia.

GOVERNMENT.—New Jersey has a governor and a State legislature which meets at Trenton in January of each year. The State legislature consists of

nineteen State senators—one from each county—and sixty assemblymen, elected in each county in proportion to its population.

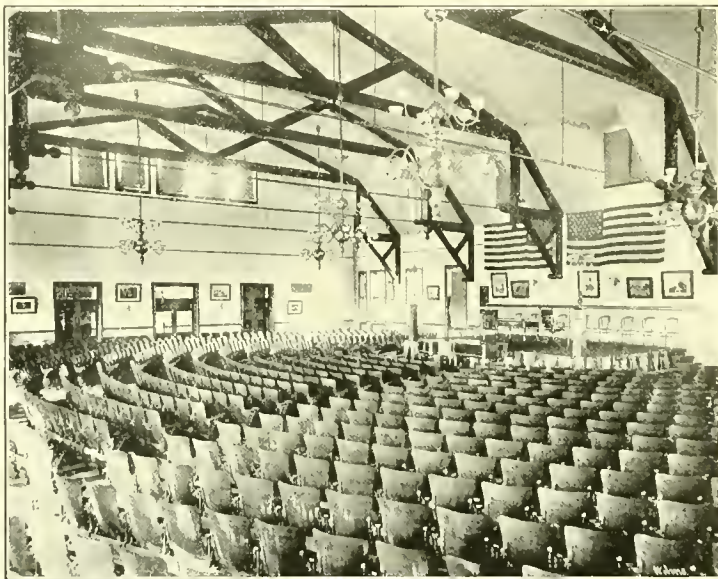
From the population table (p. 23), tell which county would have the largest number of assemblymen, and which the smallest.

The highest State courts also hold their sessions in Trenton. New Jersey sends two senators and nine representatives to the Congress at Washington to aid in making the laws for the

government of the United States in all its territory and possessions.

Who is the present governor of the State of New Jersey? Where does he reside? For how long a term was he elected? When will his term of office expire? Who is the State senator from your county? Where does he live? Who are the assemblymen from your county? Who are the two United States senators at the present time? Who are some of the nine representatives to the Congress?

CITIES.—Name and locate the *capital* of New Jersey. How does it rank in size among the ten largest cities of the State? See p. 23. About how far is it from New York City? From Philadelphia? For what have you learned Trenton is noted? Because of its being the capital, what bodies of



THE ASSEMBLY ROOM OF A FINELY EQUIPPED PUBLIC SCHOOL IN JERSEY CITY.

men meet here and for what purpose? In what State building do these bodies meet? Find out what State offices are in this building. What other State buildings or institutions are located in Trenton?

New Jersey has 190 incorporated cities, towns, villages and boroughs.

From the table on p. 24, tell the number of each: cities, towns, villages and boroughs.

Make a list of the cities with their population. Locate each. Name the ten largest cities in their order of size. Point out each. Which are located near or on the sea? Which on navigable rivers? Which are nearest New York City? Which are farthest from New York City? In the location of each of these ten cities, can you think of any reasons for its growth and development? How does Jersey City compare in size with Newark? How does Hoboken compare with Jersey City? How does it compare with Paterson?

Which four incorporated places of New Jersey have a population of from 20,000 to 25,000? How many cities have a population of between 10,000 and 20,000? How many between 5,000 and 10,000? How many less than 5,000? What is the population of the place in which you live?

Many of the smaller places in the northern, eastern and central sections of New Jersey are inhabited largely by the New York commuters. By living outside the large cities, they have the advantages of healthy country air, beautiful scenery, and cheaper living expenses.

A Type City.—There are certain regulations, laws, and conditions which must be imposed upon all people grouped in cities and towns in order to protect the life, health, and property of the people, and to make the people comfortable. Think in what ways country life is freer than city life. Can you think why so many people live in cities?



THE STATE CAPITOL AT TRENTON.

In every well-regulated city there are good streets, paved with brick, stone, asphalt or macadam, and good sidewalks. There is a plenteous supply of pure water, and a

good sewerage system draining every part of the city and vicinity. The streets and public buildings are well lighted by gas or electricity. There are parks and public statues, and many fine buildings.

There are schools—public and private—churches, and public libraries to meet the demands of the people for education, religious worship and culture. There are banks, business offices, and buildings of various kinds—as law, Life and Fire Insurance, Building and Loan Association—and many, many

others, for the purpose of doing the business connected with the city life.

There are large and small stores which are great centers of trade not only for the city, but for the adjacent country districts. There are asylums and hospitals for the care of the insane, the unfortunate, the orphaned, and the sick, and charitable institutions for the needy and the infirm.

The city has telephonic and telegraphic communication with all other cities of the United States and the world; it is connected by one or more trunk lines of railroad with the great trade and industrial centers of the United States, and by

State, and with the nearer large cities of adjacent States. A few of the cities



THE HIGH SCHOOL BUILDING OF A TYPE CITY.



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electric and steam railroad systems with nearly all other towns and cities in the

of New Jersey have also steamer communication with other cities of the United States and the world.

There is a Fire Department for the protection of the property of a city; a good city government with a mayor and his advisers at the head, and a Police Department, whose business it is to see that the laws and regulations made by the mayor and his advisers are carried into effect.

As the towns and cities of New Jersey are well governed, it is probable that all of them

much more than meet the above requirements.

Newark.—Can you think of any reason why Newark should be the largest city and the greatest financial center in the State? For what industries is Newark noted? (pp. 13, 14.)

Other important manufactures of Newark, are chemicals, electrical apparatus and supplies, fertilizers, boots and shoes, fur hats, men's clothing, women's clothing, watch cases and varnish.

Jersey City is the terminus of a large



CITY HALL, JERSEY CITY.

number of railroads, each running many trains from the West or South, which

handle an immense traffic of passengers and freight. It is also a *steamship terminal*

for lines connecting with other cities of the Atlantic seaboard and with Europe.

By what means and across what rivers do people now reach New York City from Jersey City? Tunnels are being constructed under the

river which will soon enable the trains to run directly into New York.

Besides the industries already noted (pp. 13, 14), Jersey City has tobacco factories and sugar refineries which are among the largest in the world. It has great grain elevators for receiving Western cargoes of wheat and corn and loading them on steamers for exportation. It manufactures locomotives, boilers, tin, zinc, silver and copper products, malt liquors, soap and candles. Jersey City has grown rapidly during the past ten years. Can you think of any reason for this?

Hoboken is very much like Jersey City in its location and in the character of its industries.

Paterson.—For what manufacture does Paterson lead in the United States? (p. 13.) What is this city sometimes called? Why? What other industries have already been mentioned in connection with Paterson?

Still other industries are dyeing and finishing of textiles and manufacturing malt liquors, pottery and rubber goods. What special natural advantages has it for being a great industrial center?

Camden.—What rank does Camden hold among the cities of New Jersey? What special advantage has it in its location on the Delaware and in its nearness to Philadelphia?

Its principal industries are the manufacture of worsted goods, oilcloth, foundry and machine shop products, paints, soap and candles, boots and shoes, planing-mill products, and patent medicines, ship-building, canning of pickles, preserves and sauces, producing of bread and other baker products.

Most of the other cities of New Jersey are engaged in about the same class of industries as have been mentioned.

Tell for what Elizabeth, Bayonne, Atlantic City and Passaic are noted. Name all other places mentioned among the industrial centers (pp. 9, 11, 13, 14), and tell for what each is noted.

In the third (production and occupation) map indicate the great lines of transportation which connect the smaller with the larger centers.

Make a table showing the industries and products of the ten largest cities of New Jersey.

SUGGESTIVE QUESTIONS FOR THE STUDY OF ANY CITY, TOWN OR BOROUGH.

Where and when was the first settlement made? By whom was it made? (Nationality, family or families' names.) For what purpose was it made? Did the first settlers have any special business which they wished to carry on? Describe the early homes and home life of its people. Of what did the food largely consist? How did the settlers dress, and of what material did their clothing

consist? How did they secure such clothing? Find out about the growth of this settlement; was it rapid or slow? Where and when was the first church located? Where and when was the first school established? Who taught it? How was he paid for teaching? What were the studies? How were tools procured? How and by whom were the horses shod? Tell of some of the hardships and difficulties of the early settlers of your town or city.

Where and when was the first mill or factory located? What was the nearest trade center? How did the settlers go there? For what purpose? What did they take to this place? What did they bring away? When were the first roads constructed? Between what points? What were the principal streets at first? Where and when and by whom was the first store located? When and where was the first post-office opened?

Compare the early conditions with those of the present, and trace the gradual development of industries and the growth in population to the present. Consider the character of the country and the natural advantages. Is it in a rich farming district? Is it near a mining or quarry section? Is it in a forest region? Is it near the sea, in the locality of fisheries? Is it on a river having great water power, which was so necessary for the early milling and manufacturing? Is it a section easy of access in transportation?

What do you think must have been the characteristics of the early settlers? What families and what industries have been especially active in the growth and development of this place?

What nationalities are represented to-day? Why did these people come to this city? Compare the number and denomination of churches of the present with the past. Explain their gradual growth. Compare the schools and the government of the present with those of earlier times.

Go to the older men of your place and learn all you can about earlier conditions and the growth of the place in all ways. Write sketches, taking a single subject, or phase, and describe the gradual development of that subject. For example: when was the first railroad built? Between what points? When were the first horse-cars? When was the first electric road? If a city, when was it incorporated? Who was the first mayor? How was the early settlement governed? When was the first town meeting held? For what purpose?

What officers were necessary for making and regulating laws for the people? How were they selected or chosen? What officers has your city to-day? What is the business of each? Make a collection of pictures representing the industries of your town or city.

COUNTIES.—For convenience in government, States are divided into counties.

Into how many counties is New Jersey divided?

Point out and name the counties which border on New York State. Point out those which border on the sea; those which border on the Delaware River and Bay.

Point out two counties which are in the interior of the State. Point out and name the counties in northern New Jersey; in southern New Jersey. Which counties are in

the densely populated section? Which county is the largest? Which are of about the same size? Which is the smallest? In which do you live?

In every county there are officers called County Commissioners, chosen by popular vote, who form an administration board to conduct financial and other affairs of the county. Find out what other officials each county has and what the business of each is.

In each county there is a center or shire town where county business is transacted.

What is the center or shire town of the county in which you live? Find out for just what business it is noted.

Each county has at least one prison, one court, and an almshouse. Where are these usually located?

Towns, boroughs, villages and cities are sub-divisions of counties.

How many cities, towns, villages, or boroughs

are in the county in which you live? Name the five largest places in your county.

HISTORY OF NEW JERSEY.—In early colonial times New Jersey was a single colony. Its first settlements were made about 1620 by the Dutch at Bergen near the Hudson River, and at Nassau on the Delaware in 1623, near what is now Gloucester. The Swedes made small set-

tlements in southern Jersey in 1638, and the English settled at Elizabeth in 1665. The control of the colony passed into the hands of the English in 1664, at which time it became a province of England. The population increased by considerable additions of settlers from New England. What advantages of climate or soil has New Jersey over New England that may have determined this move?

In 1676 the province was divided into East and West Jersey, and so remained until 1702, when it was reunited as a royal territory.

New Jersey is one of the original thirteen States whose people rebelled against the government of England and, by fighting, secured their independence and founded a new nation which was to become a new power in the world.



COMMON AND CHURCH BUILT BY SETTLERS FROM NEW ENGLAND IN
BLOOMFIELD, N. J.

New Jersey was the scene of great campaigns during this war of independence. After the battles of Long Island and White Plains, in 1776, General George Washington, with his Continental army, crossed the State, going from New York to Pennsylvania. Find out for what purpose this move was made—what his objective point was.

Late in December of 1776 General Washington won the famous battle of Trenton. How? This was followed early in January of the next year by the battle of Princeton.

Later, by his personal bravery, Washington saved the battle of Monmouth from being a defeat because of the treason of one of his generals, Charles Lee. Find out how he did this. General Washington made his headquarters at Morristown for three winters. Can you think of any natural advantages in the land structure of this section which made it a safe retreat for his small army?

New Jersey has given many celebrated and brave men to the country. Find out who some of them were. Find out what men of New Jersey are to-day reckoned among the leaders in the educational, industrial and national affairs of the United States.

Historical Development of the State.—State briefly what natural conditions have favored the growth and rapid development of the agricultural and manufacturing industries of the entire State of New Jersey. Name the State's natural resources. Which sections are increasing most rapidly in population? Why? Which section is increasing least rapidly, and why? Find out the order of development of the sections in the State. Find out the order of the development of the great centers. Tell the cause of the development of each. Which are the five oldest cities in the State?

Find out which manufacturing industry was started first, and to meet what demand. Find out what some of the State institutions of New Jersey are and their order of development. Locate these institutions.

GENERAL REVIEW

For what island and by whom was New Jersey named? Locate New Jersey in the United States. In the Middle Atlantic States. What is the area of New Jersey? How does it compare in size with the other States of the Middle Atlantic group? With other of the United States?

Bound New Jersey. Name the more important bays, inlets, islands and projections on its coast.

Into what two divisions is the surface of New Jersey naturally divided? What route marks the division of these two parts?



WASHINGTON'S HEADQUARTERS AT MORRISTOWN.

Which part of New Jersey lies in the Appalachian Highlands? Tell where the State is crossed by the Piedmont Plateau. Which part of New Jersey lies in the Coastal Plains? Name and locate the mountain ranges and peaks of New Jersey.

Which part of New Jersey was formerly covered by an ice sheet? How did this ice sheet or glacier affect the land

surface? What evidences are there which tell people that this section was once under an ice sheet?

What proportion of the Coastal Plains is very low? Of what does the lower portion consist? How were the Coastal Plains formed?

Describe the sand bars on the coast of New Jersey. How are sand bars formed? How are these sand bars separated from the coast? How are the lagoons and marshes being formed into land? Tell why New Jersey has a dangerous coast; and how life and shipping are protected. What can you tell of the New Jersey beaches as health resorts?

Describe the water parting of New Jersey. Name the important streams which flow eastward and westward from this water-parting. Tell into what other body or stream of water each flows. Name and describe the four largest rivers of New Jersey. Which are the more important rivers for manufacturing? Why? In which section of New Jersey are there many lakes and ponds? Name and locate the two most important lakes.

Describe the climate of New Jersey by telling:

(1) in what zone it lies and its seasons; (2) which part is made cooler by its height above sea-level; (3) which part is affected by the sea; (4) its prevailing winds during summer and during winter; (5) how it is affected by the Gulf Stream Drift; (6) its rainfall; (7) its healthfulness.

Of what does the soil of New Jersey consist? In what parts is the soil very fertile? In what part is it less fertile? Locate the pine forests of New Jersey. What are the principal occupations of the people of New Jersey? Where are the best farms? What are some of the special farming industries? Why? Name the products of the farm land. How are many of these products prepared for the early markets? Why is dairying extensively carried on?

In what ways does the coast of New Jersey facilitate fishery industries? Name the more important fishery products.

Name the important quarry products of New Jersey. Tell what you can about each. Tell what you can of clays and their uses. Name the ores found in New Jersey. Which is of great importance? Why? Tell what you can of the lumbering industry in New Jersey, and its products.

What rank does New Jersey hold in manufacturing? Give six reasons for this. What are its important textile industries?

Tell what you can of the silk industry; of the iron and steel industries; of the refining of petroleum; of leather industries; of the manufacture of jewelry; of the manufacture of chemicals.

Make a list of all the industrial cities mentioned; locate each and tell for what each is noted. Summarize by making lists of cities engaged in the different industries, *e. g.*, what cities are engaged in the iron and steel manufacturing?

Name the important steam railroads that cross New Jersey; the important canals.

Tell what you can of the population, religion and schools of New Jersey. How is the State governed? How is the State represented in the national government?

What regulations, laws and conditions must be imposed in order to have a well-governed city or town? Write a brief description of the conditions and government of your own town or city.

How many counties has New Jersey? Name them. Tell which are of most importance and why. Give brief descriptions of New Jersey's historical and industrial development.

APPENDIX.

COUNTIES OF NEW JERSEY.

Size in Sq. Miles.		1900. Population.	Size in Sq. Miles.		1900. Population.	Size in Sq. Miles.		1900. Population.
Atlantic	567	46,402	Hudson	43	386,048	Salem	339	25,530
Bergen	236	78,441	Hunterdon	437	34,507	Somerset	305	32,948
Burlington	869	58,241	Mercer	226	95,365	Sussex	529	24,134
Camden	222	107,643	Middlesex	312	79,762	Union	103	99,353
Cape May	256	13,201	Monmouth	479	82,057	Warren	362	37,781
Camberland	511	51,193	Morris	475	65,156			
Essex	127	359,053	Ocean	583	19,747	Totals for the		
Gloucester	326	31,905	Passaic	198	155,202	State	7,525	1,883,669

TEN LARGEST CITIES BY POPULATION, 1900.

Population.		Population.		Population.	
Newark	246,070	Trenton	73,307	Bayonne	32,722
Jersey	206,433	Hoboken	59,364	Atlantic	27,838
Paterson	105,171	Elizabeth	52,130	Passaic	27,777
Camden	75,935				

POPULATION OF THE 190 INCORPORATED CITIES, TOWNS, VILLAGES AND BOROUGHES OF NEW JERSEY.

	1900. Population.		1900. Population.		1900. Population.
Absecon town	550	Gloucester city	6,840	Paterson city	105,171
Allendale borough	694	Guttenberg town	3,825	Pemberton borough	771
Allenhurst borough	165	Hackensack town	9,443	Penningrove borough	1,826
Allentown borough	635	Hackettstown town	2,174	Pennington borough	733
Anglesea borough	161	Haddonfield borough	2,776	Perth Amboy city	17,699
Asbury Park city	4,148	Hammonton town	3,481	Phillipsburg town	10,052
Atlantic City	27,838	Harrison town	10,596	Plainfield city	15,369
Atlantic Highlands borough	1,383	Harvey Cedars borough	39	Pleasantville borough	2,182
Avalon borough	93	Hasbrouck Heights borough	1,255	Point Pleasant Beach bor- ough	746
Bayhead borough	247	Hawthorne borough	2,096	Pompton Lakes borough	847
Bayonne City	32,722	Helmetsburg borough	447	Port Oram borough	2,069
Beach Haven borough	239	High Bridge borough	1,377	Princeton borough	3,399
Belmar borough	902	Highlands borough	1,228	Rahway city	7,935
Belvidere town	1,784	Hightstown borough	1,749	Raritan town	3,244
Bergenfields borough	729	Hoboken city	59,364	Red Bank town	5,428
Beverly city	1,950	Holly Beach borough	569	Ridgefield borough	584
Bloomfield town	9,668	Hopewell borough	980	Ridgewood village	2,685
Bogota borough	337	Irvington town	5,255	Riverside borough	561
Boonton town	3,901	Island Heights borough	316	Riverton borough	1,332
Bordentown city	4,110	Jamesburg borough	1,063	Rockaway borough	1,483
Boundbrook borough	2,622	Jersey City	206,433	Rocky Hill borough	354
Bradley Beach borough	982	Junction borough	998	Roselle borough	1,652
Branchville borough	526	Kearney town	10,896	Rutherford borough	4,411
Bridgeton city	13,943	Keypoint town	3,413	Saddle River borough	415
Brigantine city	99	Lambertville city	4,637	Salem city	5,811
Brooklyn borough	75	Leaulet city	21	Seabright borough	1,198
Burlington city	7,392	Leonia borough	804	Sea Isle City borough	340
Caldwell borough	1,367	Linden borough	402	Seaside Park borough	73
Camden city	75,935	Linwood borough	495	Secaucus borough	1,626
Cape May city	2,257	Little Ferry borough	1,240	Somers Point borough	308
Cape May Point borough	153	Lodi borough	1,917	Somerville town	4,843
Carlstadt borough	2,574	Long Branch town	8,872	South Amboy borough	6,349
Chatham borough	1,361	Longport borough	80	South Atlantic City borough	69
Chesilhurst borough	283	Madison borough	3,754	South Boundbrook town	883
Clayton borough	1,951	Manasquan borough	1,500	South Cape May borough	14
Cliffside Park borough	968	Matawan borough	1,511	South Orange village	4,608
Clinton borough	816	Maywood borough	536	South River borough	2,792
Collingswood borough	1,633	Merchantville borough	1,608	Spring Lake borough	526
Cresskill borough	486	Metuchen borough	1,786	Stockton borough	590
Deal borough	70	Midland Park borough	1,348	Summit city	5,302
Deekertown borough	1,306	Millstone borough	200	Surf City borough	9
Delford borough	716	Milltown borough	561	Tenafly borough	1,746
Dover town	5,938	Millville city	10,583	Totowa borough	562
Dumont borough	643	Montclair town	13,962	Trenton city	73,307
Dunellen borough	1,239	Montvale borough	416	Undercliff borough	1,006
East Millstone town	417	Morristown town	11,267	Union town	15,187
East Newark borough	2,500	Mountainside borough	367	Upper Saddle River borough	326
East Orange city	21,506	Mt. Arlington borough	275	Vailsburg borough	2,779
East Rutherford borough	2,640	Neptune City borough	1,009	Vineland borough	4,370
Egg Harbor city	1,808	Netcong borough	941	Wallington borough	1,812
Elizabeth city	52,130	Newark city	246,070	Washington borough	3,580
Elmer borough	1,140	New Brunswick city	20,006	Wenonah borough	498
Englewood city	6,253	New Providence borough	565	West Cape May borough	696
Englewood Cliffs borough	218	Newton town	4,376	West Hoboken town	23,094
Englishtown borough	110	North Arlington borough	290	West New York town	5,267
Fairview borough	1,003	North Caldwell borough	297	West Orange town	6,889
Fanwood borough	399	North Plainfield borough	5,009	Westwood borough	828
Fieldsboro borough	159	North Spring Lake borough	361	Wildwood borough	150
Florham Park borough	752	Ocean City	1,307	Woodbury city	4,087
Freehold town	2,934	Old Tappan borough	269	Woodcliff borough	329
Frenchtown borough	1,020	Orange city	24,141	Woodridge borough	582
Garfield borough	3,501	Palisades Park borough	644	Woodstown borough	1,371
Glen Ridge borough	1,960	Park Ridge borough	870		
Glen Rock borough	613	Passaic city	27,777		

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